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the past. It can only be when time shall have added his mysterious charm to our artist's productions, when they shall have become familiar to the popular eye as are the constantly repeated works of the old masters, when the general taste shall have reached a far higher standard than at present, that the verdict of posterity will be announced. If our republic should be destined like Rome to triumph in every thing but in sculpture and painting, she has at least begun with better auspices. The courtly grace and bearing of our ancestors before the Revolution survive in the forms that fill the ample canvass of Copley ; the fathers of our republic and the first race of her citizens are recalled in the brilliant life that flowed from the pencil of Stuart ; the rebellious Colony sent one of her rude children to rule over the Academicians of her royal mistress ; and, if the century which has given their names to immortality shall complete its tribute with only one other name, — but that the brightest and noblest of all, — its offering to the arts has been worthy of what may be hereafter called the heroic age of the country.

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ART. IV. — 1. *History of British Birds*, by WILLIAM MACGILLIVRAY. Vol. I. London : Scott, Webster, and Geary. 1837. 8vo. pp. 631.

2. *Ornithological Biography*, by JOHN JAMES AUDUBON. Vol. V. Adam and Charles Black. Edinburgh. 1839. 8vo.

THE author of the former of these volumes is a Scotch naturalist, who aided Mr. Audubon, in the preparation of his last volume, with many of the anatomical descriptions. From the same authority, our great ornithologist evidently learned to pay attention to the digestive and respiratory organs of birds, as well as to the obvious marks of distinction, which are open to every eye. In his own work, Mr. Macgillivray gives an outline and example of the manner in which he himself proceeds. All who have attended to the subject, have been vexed, if not bewildered, by the various forms of nomenclature and classification. The general similarity of the dif-

ferent species has rendered it difficult to arrange them into well-defined portions, so that, while one system gives thirty-eight companies, there are but four in another. New facts and observations are perpetually running across these lines of separation ; and, while they show that the system needs reform, they make it equally clear that there is little hope of making it so correct, that it shall not require continual changes to keep up with new observers. Every one, who is at all interested in the subject, knows how much the doctors of the science disagree as to the order to which certain birds belong ; and this too, when the marks, which assign their place, are as obvious as a nose on a face, or a weathercock on a steeple.

The classification of Linnæus had reference to the form of the feet and the bill, principally the latter. According to the varieties of shape in this organ, he arranged birds into six orders. But, in many cases, the genera run into each other, and to some in each the distinguishing marks of the order do not apply. Vieillot, therefore, finding this classification not sufficiently exact, constructed another system, in which he was governed by the form of the feet. It is composed of five orders, with fifty-eight families ; but is open to the same objection which he made to the arrangement of Linnæus ; it being often exceedingly difficult to determine to what order or family a new found, and sometimes even a common bird belongs. Various other systems, which it is not necessary to mention, have been proposed, each liable in a measure to the same objection. One of the most curious of these attempts is the Quinary system of Mr. McLeay. According to him, all the animals in any particular group have particular characters, the union of which he calls a *type* ; in proportion as the species in the group are more or less like this type, he calls them more or less typical. The *centrum* or perfection of a group is, in fact, that part of the circumference of the circle of affinity which is farthest from the neighbouring group. One portion of a group is said to be always *normal*, that is, according to rule, or corresponding with the *type* ; another portion is always *aberrant*, that is, wandering from the rule, or not exactly corresponding with the *type*. The birds are arranged in a circular series, always consisting of five members, which gives it the name of the Quinary system. In groups which form the passage between neighbouring groups of higher denomination than themselves,

the pleasing name of *osculant* is applied. Laying aside the *osculant* groups, every natural group is divisible into five, which also admits of a *binary* distinction, that is, into two and three. All the objects of creation may thus be brought together into circular groups of fives. When the number five cannot be mustered in any particular group, the reason assigned is, that the deficient member has perished from the face of the earth, or that it remains to be discovered. If this does not give our readers a clear view of the Quinary system, we know not what will. They may possibly be reminded of the remark of Dr. Johnson, on a new invention, in which a man might move himself on a public road. He said, that in ordinary cases one had only himself to carry ; but here he had to carry himself and the machine too.

Mr. Macgillivray proposes to reject these distinctions founded upon external appearance, and to resort to dissection for surer and more definite marks by which to classify the birds. After examining a great number of birds in nearly all the families, he has adopted the intestinal canal as the central point of reference. Instead of merely describing the bill and feet, he attends to the mandibles, the mouth, the tongue, the throat, the œsophagus, the crop, the stomach, the intestine, and the cœcal canal, the modifications of which, he thinks, throw more light on the affinities of the larger groups than those of any other organ. But, after the fate of the various systems of Linnæus, Latham, Blumenbach, Illiger, Vieillot, Temminck, and Cuvier, which have passed away in succession without obtaining very general acceptance, Mr. Macgillivray does not feel much confidence to propose another, but states his opinion, that the internal construction of the bird has been too much neglected, and that, if we must choose between the external and internal markings, the latter are most to be relied on of the two. Mr. Macgillivray seems aware, that his system will not find favor with those who have depended on external appearance only. He quotes with some displeasure the remarks of Mr. Swainson, who says, that the study of the outward is more important than that of the inward organization, since only professed anatomists could ascertain the latter, and in cases of rare birds, which could not be procured for dissection, we should be wholly unable to determine where to arrange them. The question seems to be similar to that between the eyes and the nose, as to the degree in which

each was important to the spectacles. It is pretty clear, that one cannot well ascertain what the food of a bird is without examining its crop and digestive organs ; and the food indicates its favorite haunts, where its modes of flying and walking, its notes and migrations, can be observed, with all the other particulars which it is important for the ornithologist to know.

Mr. Macgillivray divides the birds of Europe into four groups, determined by their mode of life. The first he calls *Volatoriæ*, or Aërial birds, because they are specially addicted to the air, in moving from one place to another. This is divided into four orders ; the *raptores* or plunderers, the *excursores* or snatchers, the *volitatores* or skimmers, and the *immersores* or dippers. The second section consists of the *Ambulatoriæ* or Land birds, divided into seven orders ; the *rasores* or scrapers, the *gemitores* or cooers, the *deglubitores* or huskers, the *vagatores* or wanderers, the *cantatores* or songsters, the *scansores* or climbers, and the *reptatores* or creepers. The third section consists of the *Grallatoriæ*, or Wading birds, divided into four orders ; the *palpatores* or gropers, the *cursitores* or runners, the *exploratores* or probers, and the *expectatores* or watchers. The fourth section consists of the *Natatoriæ* or Swimming birds, divided into the *cribratores* or sifters, the *urinatores* or divers, the *mersatores* or plungers, and the *spoliatores* or robbers. Each of the orders contains several families, under which the genera are arranged. This classification, he says, is made for his own use, and he does not profess to expect its general adoption.

Mr. Audubon, in his last two volumes, has given in his adhesion to the opinions of his friend Macgillivray, so far as respects the anatomy and internal organization of birds, and has inserted many drawings of their organs of respiration and digestion, fully believing that the time will come when these markings will be first consulted. In this he is probably right ; and such illustrations and descriptions will add to the permanent value of his work ; but they take something from its unity, as a whole, and lessen its attraction for the general reader ; besides that the additional labor, which they require, has induced him to give up those episodes, descriptive of scenery, life, and manners, which harmonized well with the subject, and formed one of the chief attractions of the "Biography." In these sketches he was

eminently fitted to excel ; his most adventurous and wandering life has furnished him with materials in profusion, and his calm and philosophic good-nature, always looking to the bright side, has enabled him to describe them with truth and animation. Having a deep sympathy with the pathetic, and a quick perception of humor, he has found something everywhere suited to his various readers, and, what is of more importance, throwing light upon the regions he has passed through ; so that, however important his anatomy may be, we cannot but regret the absence of these pictures of life and nature, unless the results of his travels and observation should be given to the public in some other form.

It is about sixteen years since the first number of his "Illustrations" appeared, and we are rejoiced to congratulate him on the heart and hope with which he has carried on his undertaking from small and discouraging beginnings to a successful and triumphant close. To publish a work so magnificent seemed an undertaking bold even to rashness ; and the greater part of his friends advised him to abandon the plan and leave the field to other observers. But he had that confidence in himself, which was not in the least presumptuous, but founded on a just estimate of his own resources ; and, after he had listened with deference to the counsels of others, he came to conclusions different from theirs. They seemed to have reason on their side ; for when he delivered the first drawings to the engraver, he had not a single subscriber, and was incurring great expense, without any certainty of repayment, either in money or in fame. But it is well for himself and the world that he persevered. After four years of labor and anxiety he completed his first volume of the "Birds of America" ; but even then, though his fame was established, his success was by no means sure ; for we find that at least one hundred and twenty of the subscribers on whom he depended, have failed him at various times since the publication began ; — an immense proportion, since it appears by the list, at the end of the fifth volume, that only one hundred and sixty-one have been faithful to the last.

We parted from the illustrious ornithologist at the close of the second volume, in which the results of his voyage to Labrador were set down.\* In the third volume he deviated,

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\* See *North American Review*, Vol. XLI. p. 194.

we believe, from the course originally proposed, so far as to give the water-fowl, without waiting to complete the list of land birds, a course which we apprehend was urged upon him by others. The former would naturally come last in such a work as this, since they are spread over a vast extent of coast, are wild in their habits, and, having their haunts in the clefts of rocks or on the waves of the ocean, present a more difficult study, requiring more time and closer observation than the other. But in that single volume he has an account of about sixty species, not described by Wilson. Some of his best descriptions of birds are found in this volume ; such as that of the Canada goose and the mallard ; and he shows how general is his observation of nature in the account of the sun-perch, which forms the subject of one of those pleasant episodes just mentioned. He was struck with its earnest care of its eggs, and the quickness with which it removed any substance that happened to fall upon the bed. Placing a worm upon a hook, he sunk it so that it fell upon the border of the nest, where he allowed it to rest upon the bottom. The little fish kept watch on his motions, and, taking the worm in its mouth, carried it gently over to the side nearest to him, as an intimation that he might remove it if he would. He then tried a grasshopper with the same success ; afterwards, a naked hook was cast upon the nest, which seemed to trouble the little fish, as if it was conscious of danger ; but after a time it gathered courage, and, taking the hook up with great care, it dropped it over the edge of the bed. No bait whatever could tempt the fish to bite at that time, careless as it is on other occasions ; and, after beating the water with his rod, he saw, as soon as the water became clear, that the fish was busy smoothing its agitated bed. Such passages as this show the true lover of nature, who is not enslaved to his own pursuit, but has an eye for every thing which can enlarge the boundaries of science, or increase our admiration of the works of the Creator's hand.

After an interval of about three years, the fourth volume appeared in the summer of 1838. He was desirous to explore the western coast of the Floridas, and for that purpose was aided by the government, a revenue cutter being placed at his disposal, in which he sailed, in 1837, from the mouth of the Mississippi to Galveston Island, in Texas, examining

the various points on his way. After being exposed to venomous insects and withering heat, not to speak of wading through deep mud for days together, the result was, that he did not encounter a single bird which was not previously known. It was, however, of some service in determining the migratory movements and geographical distribution of many of those wayfarers which come from the south in summer, and in winter retreat before the northern storms. On his return to England, he had the mortification of finding, that many of his British subscribers had discontinued their subscriptions, and those who remained were so desirous of seeing the work completed, that he was obliged to crowd a number of different species into the same plate, in order to hasten to a conclusion. Meantime, Dr. Townsend returned from his Northwestern expedition, with a new and valuable collection of birds, which he was ready to supply ; and these, in spite of threatenings from some, and actual refusal from others to continue their subscriptions, Mr. Audubon published, being inflexibly determined to make the work complete.

We cannot undertake to give an account of this fourth volume, which is full of minute and lifelike description. We must, however, make an exception in favor of the ruff-necked humming-bird (*Trochilus rufus*), which was first discovered by Captain Cook in the vicinity of Nootka Sound. Dr. Richardson and Mr. Drummond do not appear to have seen it ; but Mr. Nuttall and Dr. Townsend found it in the Blue Mountains of the Columbia River. They describe it as resembling a "breathing gem or carbuncle of living fire," opening its splendid ruff as if in rivalry of the sun. If any one approached the nest where the females were sitting, the males would dart out like burning coals, passing very near the face of the intruder with their arrowlike flight, at the same time uttering a sharp, bleating sound. The nest is like that of the common species, and the female resembles ours in the quiet composure with which she keeps her place while sitting. On a clear day, the male may be seen rising to a great height in the air, and then, after descending near the ground, rising again to the same height as at first, describing half of a great circle in this curious evolution. When coming down, it makes a sound astonishingly loud for so small a creature, resembling the rubbing together of trees in a high wind.



We may also remark, for the edification of those, if any remain, who believe in the wintry submersion of swallows, that Mr. Audubon found immense numbers of the bank swallow in East Florida in winter. The green-backed and barn swallows were also there, but not so numerous as at New Orleans. The transient cold weather, which sometimes occurs in Florida, proves fatal to many ; on one occasion, when ice was formed in the waters, many were found dead along the shores, while the rest were evidently troubled in mind, and preparing to retreat to some warmer country. And thus, when overtaken by the cold in their summer residences, many die in their holes or on the water, and some are found in a state bordering on torpidity. Mr. Audubon discovered a new species at the south, resembling our bank swallow so much as to be confounded with it at first sight, but, when examined, obviously different from it in some particulars of form and markings. The violet-green, a new species and more beautiful than any other known, is described by Mr. Nuttall, who met with it in the table-land of the Rocky Mountains, where it seemed to occupy the deserted nests of the Cliff swallows, instead of building new ones of its own. From Dr. Townsend, we learn, that the Cliff swallow, near Columbia River, attaches its nest to the trunks of trees ; and Mr. Audubon assures us, that he has seen nests of barn swallows in chimneys, and on the sides of wells. If so, it shows that we can rely but little on habits of this kind in distinguishing one species from another.

The closing volume of the "Biography" appeared in the early part of the last year ; and it must have been with various and uncertain feelings, that the author saw his labors drawing to an end. On the one hand, he was sure that he had raised an imperishable monument to commemorate his own renown ; all the anxieties and fears which overshadowed the commencement of the enterprise had passed away ; the prophecies of his kind but overprudent friends, who did not understand his self-sustaining energy, had all been proved untrue ; the malicious hopes of his enemies, — for even the gentle lover of nature has enemies, — had been disappointed ; he had secured a commanding place in the respect and gratitude of men ; like the traveller, reaching his home, after a long and difficult journey, he had secured a treasure of rich and

glowing recollections, to warm his own heart in his declining years, and to kindle enthusiasm in his children's children. But, on the other hand, he had parted from an enterprise which for years had formed the subject of his thoughts by day and of his dreams by night ; he had lost the employment which had kept all his powers of body and mind in healthy though intense exertion ; whatever works he might afterwards engage in, the great work of his intellectual life was finished ; he was no more to hear the woodthrush singing its matin song above him as he waked from his bed in the forest, nor to see the silver water-bird diving before the ripple of his light canoe. Surely, it must have been with a strange mixture of feelings that he could say, that his great warfare was accomplished ; and his trumpet of victory at the result must have given an uncertain sound, partly exulting in his success, and partly lamenting that his great work was finished.

Feeling, as well he may, that he has done his part in the service of science, he now recommends to others to pursue the same course, assuring them that, after all which has been accomplished, much yet remains to do. Since Wilson's work was completed by the addition of the ninth volume, the number of American birds known to science has doubled. From the suggestions of Dr. Townsend, and other bold adventurers, who have explored the northwestern regions, there is reason to suppose that every diligent observer will find something to add to the list ; Captain Ross and Captain Back both say, that they saw curious birds, which had not been described, and which they were unable to secure. Mr. Audubon says, that he has had the same experience in Labrador, Newfoundland, and even in the inhabited portions of the United States. New discoveries are constantly made in the most familiar places ; witness the Hudson's Bay titmouse, which Mr. Greene has found in Brookline, and the amount of information furnished to the work before us by Dr. Brewer, of Boston. Such being the encouragement, (and it is not necessary to speak of the attraction of the pursuit,) there can be no doubt, that the path will be trodden by many enterprising feet. Many could be named in this vicinity, who are giving an earnest and judicious attention to the subject where their time is employed with other labors, and their advantages for the study are but few, and who nevertheless are adding to

our knowledge, by their watchful observations, with a zeal and intelligence worthy of all praise. The advice which Mr. Audubon gives to any who resolve to tread the path where he has gone before them, illustrates his own character and ways of proceeding. It is to leave nothing to memory ; in some things it may be safely trusted, but not in these observations. They must be carefully written down with *ink*, and not with the treacherous pencil. If the adventurer should traverse hundreds of miles, searching all the woods, barrens, shores, and marshes, he must not permit himself to be vexed with his ill success ; for sometimes, after days and even weeks of unrewarded labor, one may enter a grove, or come upon a pond, or find his way through the tall grass of the prairie, and there have at once before him what he most desires to see. He imagines one of these wayfarers on the side of the Rocky Mountains, alone with Nature, surrounded by turrets of stone, shooting up all about him to the skies. His trusty gun has brought down a pheasant ; the demands of science are first to be answered. He takes an exact measurement of all its parts, and notes down a short description, which is read twice over, in order to correct errors and supply what is wanting. The skin is then taken off with care ; but, instead of listening to what hunger has to say, he follows Mr. Macgillivray's directions, and examines the internal organs with even more care than the outward markings. This done, he feels at liberty to think of his own wants, which begin to be somewhat clamorous ; and, after broiling the bird on a fire kindled with his fowling-piece, he washes it down with Nature's own champaign from the neighbouring brook, which satisfies his thirst, and leaves no aching head. Then he lies down, like Jacob in the wilderness, with a stone for his pillow, but dreams neither of earth, nor of heaven, nor of the ladder that connects the two. In the morning, he packs his bird-skin, rolls up his drawing, and goes on his way rejoicing ; sometimes with success, sometimes without it, but always satisfied that the pursuit itself, like virtue, is its own sufficient reward.

In this volume, Mr. Audubon gives an account of a short excursion to the Highlands of Scotland, in company with his friend Macgillivray, which is interesting, though not connected with the case in hand ; interesting because it is char-

acteristic, showing how he, after his education in the American wilderness, was affected by scenery which resembles it in wildness, though not in power. This is what interests us in every well-written tour ; the more we know of the writer, the more does it engage us ; because we are able, from a comparison of ourselves with him, to know how we should be affected in the places which he visited, and with the scenes before us which he saw. Mr. Audubon took passage at Edinburgh in a small steam-boat bound for Stirling. The skies were clear and serene, the waters were alive with shoals of fish, the gulls keeping watch above them ; the cormorants stood pondering on the rocks, and the guillemots and auks dived or flew away as the boat approached them. The steam-boat was deliberate enough for a passage-boat, but it went too fast for him, and he solemnly resolved, that, if ever he visited the Highlands again, it should be on foot, "since no man, with nerve and will, and an admirer of the beauties of nature, can ever truly enjoy the beauties of travelling unless he proceed in that manner."

After passing the night at Callender, his nature speaks again. "If travellers are sluggards, I pity them in my heart ; for, depend upon it, nature is never more beautiful, than when she bathes herself in the morn in her own dewy waters." The meadows, though it was autumn, were yet green, the hills purpled with heather, and, as the sun's rays dispelled the mist that lingered on the summits of the mountains, he thought he had never beheld scenery that interested him more. But his own pursuits recur to him, and he says, "Had we dog, and gun, and privilege to shoot, we might strike perhaps a grouse, perhaps a black-cock." But the roar of a cataract comes upon his ear ; the stream, descending into the ravine, is on its way to the river below. He descends the rocky pass, steps over a crazy bridge, reaches the projecting angle of a rock, and gazes upon the scene. He had seen hundreds of streams equally turbulent ; but none so curiously confined in its rocky banks, nor so abrupt in its various falls. He thought of the retreat it must have afforded to the Celts in their wars with their Saxon neighbours, but was powerfully reminded of similar natural fortresses belonging to our own sons of the forest, where they are not yet dislodged by the avarice of those, who,

— *lucus a non lucendo*, — so fantastically denominate themselves civilized men.

When he came to the Trosachs, so renowned in Scottish minstrelsy, he was regaled, at the inn, with the sight of many who had come from various parts of the three kingdoms, either to enjoy the scenery, or to be able to say that they had been there. This intelligent party were smoking their cigars, and prating about the merits of their wines, evidently regarding their dinner as the most important concern of life. It never occurred to him, that this was a trait of national character ; he was too much a man of sense, to run from slender premises into rash and sweeping conclusions. But, the male and female wiseacres from abroad who bless our country with their presence, if they find a few such examples in the neighbourhood of romantic scenery, are ready to die in the faith, that Americans are no lovers of nature, and that it was a strange oversight to place Niagara in a land so tasteless as ours. He remarks, that the crags of the Trosachs did not affect him so powerfully, covered with verdure, as if they had been bare ; not because they were not grand in themselves, but because he had been accustomed to vast forests and majestic trees at home.

But we cannot follow him in his tour, and will only express the hope, that he will hereafter find some opportunity to give the world more of his fresh and bold descriptions of what he has seen in his various wanderings. We have much already in his episodes ; but there must be hundreds of passages more, of equal, perhaps greater interest, to readers, if not to him. We find, in tales of common experience, that the most homely description of humble life takes stronger hold of the feelings, than the most ambitious imaginations ; so there are many things which travellers pass over, because they are familiar ; and yet, if they could but be persuaded of it, these are the very things, which the reader is most desirous to know. Portraits, too, like that of Bewick, might be added, without any violation of propriety ; for, while coxcombs, male and female too, if such a thing may be, can hardly tread upon that ground without offending, there is no danger, that a modest, sensible, and well-bred man, shall wound the feelings of any, or make it necessary for the hospitable to close their doors.

The first three birds described in the fifth volume, are dif-

ferent kinds of troopial, lately discovered in the West. The first, the red and white-winged troopial, *Icterus tricolor*, was found by Mr. Nuttall in Upper California, where it is very abundant round Santa Barbara, in the month of April. It bears a strong resemblance to our red-wing in its notes and general appearance, but the bill is more slender, the tail is even, not rounded, and the red on the wing is carmine, edged with white, instead of scarlet, edged with pale yellow, as in the other. They move about in large, whirling flocks, with great noise, feeding principally on the larvæ of blow-flies, which are found in the offal of cattle, killed near the town for the sake of their hides. The yellow-headed troopial (*Icterus xanthocephalus*), which was discovered by the naturalists of Major Long's expedition, is also described. It was found by Mr. Nuttall, around the Kansa (*Texan*) agency, in company with the cow-bird, not knowing, perhaps, that the proverb, *Noscitur ex sociis*, will apply to birds as well as men. It has no note, that can be called a song, but, as it thrusts its bill into the ground, in search of insects, makes a chuckling sound, tapering off into a squeak, inferior in melody even to the cow-bird's. Another troopial, called Bullock's (*Icterus Bullockii*), is found in the same localities with the last. It resembles our beautiful Baltimore in many respects, building its nest in the same manner, but not comparing with it in clearness and power of song. Dr. Townsend found it in the black hills and the forests of Columbia River. Mr. Audubon notices the points of resemblance between some of the grakles and troopials. The crow-blackbirds and red-wings, together with the cow-birds, move about in flocks, where they may have the benefit of man's agricultural labors. All are incessant talkers, with notes more chattering than musical; and, though their bills differ in shape, their food is the same. This running of different kinds into each other shows how necessary, and, at the same time, how difficult it is, to depend on common classification.

The present volume extends our acquaintance among the finches, and one of them, resembling our beautiful fox-colored sparrow, is very properly named *Fringilla Townsendi*, in honor of him to whose enterprise we are indebted for the discovery. He found it numerous in the plains of the Colorado of the West, in the Rocky Mountains. It is a very active and shy

bird, keeping constantly in the low bushes on the ground. Its voice is a sharp, quick chirp, and occasionally a low, weak warble. Dr. Townsend and Mr. Nuttall also discovered *F. bicolor*, a sort of cousin of our bob-o-link, on the plains of the Platte, where it feeds on the ground, in the same manner with our grass-finch, to which it is somewhat allied. While the flocks are feeding, the males are seen to rise suddenly to a great height in the air, and, hovering there with their wings in rapid motion, they sing a number of very sweet and animated notes, after which, they immediately resume their places on the ground. Mr. Nuttall thinks it the sweetest minstrel of the prairie, the whole employment of the tame and unsuspicious parties being to rival each other in song. Dr. Townsend discovered a relation of our common snowbird in the woods of the Columbia; but, unlike ours, always keeping in the depth of the forest, and never coming out in the fields or way-sides. Its song was not heard at that season, nor were the naturalists able to procure its nest, eggs, or young. They gave it the name of *F. Oregona*, from the region where it dwells. They also found a finch, *F. arctica*, resembling our common ground-robin, which was first described by Mr. Swainson, in the "Fauna Boreali-Americana." They found it entirely confined to the western side of the Rocky Mountains. It is more timid than our species, and, instead of the double note *pee-wink*, it mews like the cat-bird. In its partiality for the ground, its nest, and many of its habits, it strongly resembles ours. A single specimen of a green-tailed sparrow, *F. chlorura*, was found by Dr. Townsend; but it was young, and the plumage not fully developed; of its habits, he learned nothing. Beside these new species, much has been added to our acquaintance with the habits of those already known.

In his account of the Louisiana Hawk, *Falco Harrisii*, so called for his friend, Edward Harris, Esquire, Mr. Audubon introduces some curious and valuable remarks upon the flight of birds, which is generally so characteristic, that as far as he can see them, he can distinguish them by their motion. It is generally supposed, that their rapidity is in proportion to the length of their wings; but this, he says, is an error. Their swiftness depends not upon the size or shape of the wings, but on the force and muscular energy with which they move

them. Thus the carrion vulture, though its wings are large, is heavy and ungraceful in its motions. The Golden Eagle, which is always considered powerful in its flight, and sustains itself long on the wing, he says is rather unmanageable and slow, seldom giving chase to its prey, but rather falling upon it, with its wings partially closed, in such a manner as to produce a rushing sound, which alarms and paralyzes its victim. The red-tailed hawk comes under a similar description; so also the black warrior, the broad-winged hawk, the red-shouldered, the common buzzard, and the rough-legged falcon, instead of being the swift destroyers they are commonly imagined, are rather indolent in their habits, and live not by overtaking and running down, but by swooping and pouncing upon, their prey. Another description of the rapacious birds are those, which have wings longer and almost equally powerful, but are aided by long and forked tails, in guiding their flight. Such are the swallow-tailed and the black-shouldered hawks, and the Mississippi kite, whose motion is protracted, strong, and flowing; these have not the power of swooping, but procure their prey by gliding through the air in broad curves, not disdaining to secure such insects as they encounter in their passage through the air. The marsh hawk somewhat resembles the latter class, having large wings and tail, but depends on surprising or steadily watching its prey. The swiftest of the hawks are the goshawk, Cooper's hawk, the pigeon and sharp-shinned, which, with wings short, and somewhat rounded, but long bodies and tails, secure their prey by active pursuit upon the wing, dashing wildly through the air, like arrows, and striking their victim, with sure effect, to the ground. They are probably aided by their feet in directing their motion; but, at any rate, they are the most rapid and ferocious of the race to which they belong.

The peregrine falcon and gyrfalcon, with the sparrow and pigeon hawks, have wings rather broad and pointed, with long, firm, and elastic tails. In flying, they move with strong and quick-succeeding strokes, so that they can overtake most birds in the pursuit, while they have also the power of pouncing, like eagles, on their prey. Their vigor of flight leads them to extensive migrations. Unlike the others, which seldom go far from their birthplace, these pursue their prey over a vast extent of country.



The birds of prey most strikingly distinguished from the rest, are the bird of Washington, the bald eagle, and the fish-hawk. The latter balances itself on its wings over the water, and, when it marks its victim, either glides or plunges upon it, generally, though not always, with success. The bird of Washington glides over its prey and secures it like the gulls. The bald eagle, not confined to fish, like the former, secures it sometimes by robbing the fish-hawk, sometimes by wading, and varies its fare by destroying small quadrupeds and other birds.

From this volume we learn, that our own sweet blue-bird has relatives in those parts of America, which have hitherto been little explored. Its own range is not small; Dr. Townsend found it at the head waters of the Missouri, though it has not yet been seen on the west of the Rocky Mountains. Dr. Richardson traced it as far as the 48th parallel of latitude, where it disappeared, and Mr. Audubon himself found it breeding in Texas, where it abounds. The arctic blue-bird, *Sylvia arctica*, was found by Dr. Richardson in the fur countries, and Mr. Nuttall and Dr. Townsend encountered it on the Platte and Columbia rivers. It resembles the common species in color and note, but is more shy, with a less powerful song. It is distinguished from it by its breast of greenish blue, and its longer and more pointed wings. Another, called the western blue-bird (*Sylvia occidentalis*), was discovered by Dr. Townsend, nearly resembling both the others, except in its having a chestnut band across the back, with the throat blue, but the fore part of the breast red. The song of the latter is more varied, sweet, and expressive than that of ours, but it has the same gentle and affectionate disposition to its own. The nest of the arctic blue-bird was found in a cliff of the Sandy River, a branch of the Colorado of the West. The western builds in the knot-holes of the oaks, in California and other places, where it abounds.

A considerable addition has been made to the number of our warblers, to whose sweet strains we are indebted for so much of the loveliness of spring and summer; but it is a little singular, that, after all Mr. Audubon's researches, some, of which single specimens only were known to Wilson, remain represented by single specimens still. Such are the carbonated and the blue mountain warbler, which last was found

near the range from which its name is derived. Others have grown common in places where they were formerly rare. Swainson's warbler, which was once scarce in South Carolina, where it was discovered by Dr. Bachman, was lately found by Mr. Samuel Cabot, Jr., in the vicinity of Boston. The same is true of other species. For a long time, Mr. Audubon saw only single specimens of Bewick's wren and Stenslow's bunting; but now the former is common on the Virginian mountains, and the latter in New Jersey, as well as more southern States. The Pipirie fly-catcher was not known to exist eastward of the Floridas, till Mr. Audubon had found it there; but now it breeds within the city of Charleston. Traill's fly-catcher, which Mr. Audubon discovered on the Arkansas, is now known to abound near the Columbia River. Dr. Brewer has supplied information concerning various birds, which have lately made their residence in Massachusetts, and which formerly were thought always to keep at a great distance from its bounds.

One of the warblers in question has been named in honor of Mr. Audubon, or, to speak more properly, has been honored with his name. *Sylvia Auduboni* was found by Dr. Townsend near the Columbia River, where it remains from the middle of March to the last of June, and again appears in October. Its note resembles that of our familiar yellow-bird, and breathes life into the dreary wilds of the Oregon, when it comes in the train of spring. In its markings, it is so like the myrtle-bird, that it is difficult to know them apart. Another species, resembling the mourning warbler, bears the name of Macgillivray (*S. Macgillivrayi*). It is common in the woods and plains of the Columbia, where its haunts, like those of the Maryland yellow-throat, are in low and shady bushes. Another of Dr. Townsend's discoveries bears the name of Delafield (*S. Delafieldii*), also resembling the one just mentioned; it was a young yellow-throat of this species, to which Mr. Audubon gave the name of Roscoe. There is yet another, which resembles the black and white warbler in colors, though in other respects it is like the yellow-crowned and Audubon's. To this, the discoverer, Dr. Townsend, has given the name of black-throated grey warbler (*S. nigrescens*); it remains till winter in the forests of the Columbia, where it breeds. Its song is delicate, but monotonous.

The list of our woodpeckers is greatly extended by this volume, and much information supplied concerning those, which were formerly known. All our knowledge of the red-cockaded, *Picus querulus*, was compressed, by Nuttall, in five lines of his work ; of this, Mr. Audubon has given an ample description. He was fortunate enough to secure two males in Louisiana, which resisted his attempts to seize them, and, when they were confined in his hat, hid their heads if he looked at them, as if ashamed of their bondage. One died before he reached the house ; and, as the other could procure no food, he let it go. In its wild state, it fed not only on insects, but on fruits and seeds. In winter, he has seen several of them enter a hole at evening, where they probably spent the night ; in rainy weather, they do the same at various hours of the day. He tells us, that there is a species, which he calls the Canadian (*Picus Canadensis*), confounded with the hairy woodpecker ; the difference never has been suspected, though the new species is considerably larger than the other. He first became aware of the difference in the State of Maine, where it abounded near the woods, roads, and farms, often resorting, like the log-cock, to decaying logs, in search of food. Its motions are heavier than those of *Picus villosus*, and accompanied with a rustling sound of the wings ; its notes are much louder and more shrill ; but the principal difference is in size, the length of this one being an inch and a half, and the extent two inches and a half, greater than those of the other. The pileated woodpecker, which is found in our younger settlements, is ascertained to inhabit the Oregon Territory, Texas, and probably all the region between. At Galveston Island he saw one tapping against the roof of a house, a most unusual familiarity in one of our wildest birds. In winter, he has seen it with its head out of its hole, as if speculating upon the weather, and considering how long the season was likely to last. He tells us, that a nest of one of the golden-winged woodpeckers (*P. auratus*) was taken by Mr. McCulloch, of Nova Scotia, which contained eighteen young birds, beside three eggs, more than three times the number, which they have ever before been known to lay.

Of the newly discovered birds of this species, *Picus Auduboni* is one, so called by Dr. James Trudeau, who first encountered it in a wood, not far from New Orleans. His

attention was struck by an unusual note, and, after some difficulty, he succeeded in getting possession of the bird from which it proceeded. He found it to resemble the hairy and downy woodpeckers, being in size intermediate between the two. Another, nearly resembling the downy woodpecker in form and color, bears the name of *Gairdner's* (*P. Gairdnerii*) ; he does not say by whom it was named, nor where it is found. He has named one, discovered by Dr. Townsend, near Columbia River, after Mr. Harris, to whose friendship he acknowledges himself deeply indebted. A specimen of great beauty, found by Mr. Nuttall, in Massachusetts, bears the name of *P. Phillipsii*, after Benjamin Phillips, Esquire. He has also complimented his friend, Miss Martin, who is often honorably mentioned in his volumes, by calling one, which was found near Toronto, Maria's woodpecker (*P. Mariæ*).

A splendid bird of the West, is called the Imperial (*P. imperialis*) ; it was shot by Dr. Townsend, who succeeded in bringing it to the ground, but was not able to secure it, because pursued by Indians, and left behind by his impatient party ; but it was described by Mr. Gould, who found it in California. It exceeds the ivory-billed in size, and, from his account of it, must be a powerful and noble bird. Near Fort Vancouver, on the Columbia River, Dr. Townsend observed a woodpecker, which was black, with a large red space between the shoulders. It was flitting about among the pines, very shy, and sending out a guttural sound, which was new to him. After pursuing it a while, he shot it, and it fell apparently dead ; but it came down in tangled bushes, and, while he was gone to the fort for a large knife to clear a way to it, it escaped, and he never saw another. He procured some specimens of the red-breasted (*P. ruber*) of Gmelin, and *flaviventris* of Vicillot, but did not succeed in obtaining much information concerning its habits. The red-shafted (*P. Mexicanus*), first described by Mr. Swainson, was often seen west of the Rocky Mountains ; but it is so similar in habits to our golden-winged, that it hardly needs any description. Mr. Audubon has also given a drawing and description of a three-toed woodpecker (*P. hirsutus*), which resembles the Canadian, and was confounded with *P. tridactylus*, till the difference was pointed out by Mr. Swainson. It is the most common species north of the Great Slave Lake, and is found in

all the spruce-fir forests between Lake Superior and the Arctic Sea.

The new fly-catcher, first described in the "Fauna Boreali-Americana," where it is called *Tyrannula pusilla*, is here called *Muscicapa pusilla*, with information concerning it supplied by the indefatigable Nuttall. Dr. Richardson saw it at Carlton House in May; Mr. Nuttall found it on Wapatoe Island, formed by the junction of the Multnomah with the Columbia River. Mr. Audubon, however, has himself been acquainted with it in Labrador and Newfoundland, where it resorts to the haunts of insects, and, like our fly-catchers, takes its station on a branch, or twig, for the sake of watching their motions. He found a nest between two small twigs of a low bush, containing eggs, that he would have mistaken for those of the redstart, if he had not seen the owner. The Rocky Mountain fly-catcher (*M. nigricans*), described by Mr. Swainson among the birds of Mexico, was also found in California by Mr. Nuttall; but concerning its habits and peculiarities very little was known. On the coast of Labrador, Mr. Audubon found the short-legged pewee (*M. Richardsonii*); it resembles our common pewee so much, that it is not distinguished from it on a careless view. He observed a difference in certain of its habits, but was not struck with it, because the ways of common birds often vary, to suit a change of circumstances and situation; but, on examination, he found, that the nest of this species was always placed on a bush, suspended between the forks of two twigs, and its eggs, instead of being white, were spotted with brown upon a bluish ground.

Some addition has been made to the gloomy family of owls. Mr. Audubon shot one at Green Bay, about the size of the Acadian, but unfortunately lost both the drawing and the description; from its most obvious peculiarity of appearance, he named it the fork-tailed owl (*Strix forficata*). He also furnishes a drawing of the little night-owl (*Strix passerina*) of Gmelin, from a specimen sent to him from Nova Scotia. Dr. Townsend supplied him with another, called the little Columbian (*S. passerinoides*); he had previously seen it in the Edinburgh Museum, to which it was brought from Fort Vancouver.

Mr. Audubon and Dr. Bachman have both seen a hawk, repeatedly, in South Carolina, which they are not able to de-

scribe, because they have not procured a specimen. It is remarkable for the great breadth of its wings. The color is brown, except the tail, which is barred with white. He complains, that the red-tailed hawk is unfortunately named *F. borealis*, since it is rare in northern regions, and quite abundant in the southern ; he probably speaks comparatively, for in Massachusetts it is not uncommon in the depth of our woods. It now appears, that the bird to which he gave the name of little corporal (*Falco temerarius*), is the young of the pigeon-hawk, and was mistaken for a distinct species, on account of the difference of color and the great inferiority of size. The black warrior, which was at first questioned, is now admitted to be a distinct species ; but Stanley's hawk is acknowledged to belong to the same species with that called Cooper's hawk by Bonaparte, who became first acquainted with it from Mr. Audubon's drawing. In his account of the rough-legged falcon, he makes some interesting remarks respecting the migration of birds. He had, like others, observed, that young birds, reared in high latitudes, seemed disposed to go further South than their parents, in order to secure climates suited to their tender age. The old birds of some species, after they have acquired full firmness and strength, never leave the countries in which they have fixed their residence ; the old gyrfalcon seldom goes further South than Labrador, and its young are contented with the genial warmth of the winter of Maine. The old peregrine falcon goes as far South as Carolina, while its more effeminate young spend the winter in South America. He thinks it established, that the young of all those, which, in mature age, breed in the far North, will be found to remain, for the same purpose, at a greater or less distance from their own birth-place, according to their strength and age. Therefore the young of the gyrfalcon will breed in Labrador more than the adult, which is able to go to more northern regions. The same might be expected of the peregrine falcon ; and accordingly, he found the young birds of this species further South than the old ones ; very few of those patriarchs had stopped in Labrador, while it was not unusual to meet with the nests and young of more youthful housekeepers. In France, and the south of England, he has observed, that the nightingales heard in late and cold springs are the best singers, where-

as, in mild seasons, there was a great variety in the richness of their song. It was explained by supposing, that only a few young birds appeared in cold seasons, the greater proportion remaining to breed in warmer countries. Should these remarks prove correct, it will explain why the old rough-legged falcon should never have been found in the south of Europe or America.

Mr. Audubon has also made general observations with respect to the colors of the plumage in birds of different ages, which, if confirmed by observation, may prevent our mistaking the same bird, at different periods of life, for two of distinct species, an error into which ornithologists have often fallen. As to the rough-legged falcon, he says, that the younger birds will be found of lighter tints than the old, and that these tints become, as is always the case, stronger and more decided, as they advance in age. In the hawk family, the younger the bird, the lighter are its markings, and when they either gain or lose bands on the tail, the prevailing color, whether barred or not, becomes firmer and clearer. The colors of an old bird may be either lighter or darker than those of the young, till the young have acquired their full plumage ; still the difference spoken of will appear ; the young of light-colored birds are generally of a different character, that is, darker, — while, in cases where the adult is dark-colored, the young are more nearly like their seniors. He has observed, that, in birds which are able to reach high latitudes for the purpose of breeding, the coloring is superior to that of others, which could not go so far.

We have here presented to us some new species of tern, one of which, shot by Mr. Audubon, near New Orleans, he has called Havell's (*Sterna Havelli*), in compliment to his engraver, who, he says, deserves it better than many to whom such honors have been paid. Trudeau's tern (*S. Trudeaui*) was procured at Great Egg Harbour, in New Jersey, by the gentleman whose name it bears. Mr. Audubon says, that, having taken several specimens of the marsh tern of America, and compared them with the gull-billed tern of Colonel Montagu's collection in the British Museum, which was procured in the South of England, there was no doubt of the identity of the two. The latter is said to resort, from preference, to lakes, marshes, and rivers ; and our tern, as its name denotes,

rejoices in marshes likes those at the mouth of the Mississippi, where it arrives in spring, from Texas, flying over the borders of the sea. Their flight is very graceful ; they swim lightly, but not fast, and, when taken, only attempt to bite the hand without trying to escape by diving. They live wholly on insects, and never on strand birds and their eggs. Sometimes they are beaten and pursued by the king-birds and martins, whose foraging ground they have happened to invade. If the male was killed by the gunner, the female would simply take warning and move out of the reach of shot ; but if the female dropped, the male, more chivalrous, would fly immediately to aid her escape, with so much indifference to his own exposure, that there was no difficulty in bringing him down.

Among the many valuable notices furnished to this work by Dr. Thomas M. Brewer, the suggestion respecting the song-sparrow has peculiar interest, the bird being one of the sweetest heralds of the spring. He is persuaded that two distinct species are confounded under this name, one of which was figured by Wilson, the other and the more common, by Mr. Audubon. The former has its breast spotted, all over, while that of the other is less so, except in the centre, where the spots run together into a star. The former builds in bushes or trees, the other always on the ground ; and, while the one chooses for this purpose orchards or pastures at a distance from habitations, the other comes familiarly into gardens and enclosures, as if to put itself under the protection of man.

Mr. Audubon has thus completed a work, of which the country has reason to be proud ; and the spirit of adventure which he has manifested in undertaking, and the iron perseverance with which he has carried it through, have been rewarded, so far as fame can repay him, with the success which they well deserve. He is of such an age, that we may hope for many advances in his favorite science yet to be made by his energetic and inquiring mind ; meantime he has called forth many others by his spirit and example, who will follow out his researches with that enthusiastic interest which the study is sure to inspire. No one can pay the least attention to it without being led, almost unconsciously, onward ; and, though it is not given to all to be distinguished ornithologists,



they may become lovers of nature, and thus secure to themselves a perpetual source of improvement and delight.

It is understood that Mr. Audubon is now engaged in preparing an edition of his work with illustrations reduced in size, the price being lessened in the same proportion. As taste and wealth are not always united, there are doubtless many who were utterly unable to possess the former magnificent work, but who would go to the full extent of their means for the sake of having a faithful representation of the birds which he has taught them to admire. There is no work of the kind now within their reach. Wilson's reputation will depend, not upon his drawings, but his eloquent descriptions, while his successor manages the pencil and the pen with equal spirit and power. The times, indeed, are not propitious to such enterprises ; but we rejoice to hear, that subscribers are not wanting ; and they need not be assured, that, if they themselves reap no benefit from their investment, their children will learn to observe, to examine, and to love those works of nature, all of which awaken moral and religious feelings ; so that the same process will refine the taste, enlighten the mind, and purify the heart.

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ART. V. — *The Works of LORD CHESTERFIELD, including his Letters to his Son, &c. To which is prefixed, an Original\* Life of the Author.* First complete\* American Edition. New York : Harper & Brothers. 1838. One volume, 8vo. pp. lxxviii and 647.

LORD CHESTERFIELD's name is intimately connected with the subject of private education and the formation of manners ; and in many minds it is identified with hypocrisy, worldliness, and libertinism. These we suppose are his

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\* The title-page of this work may mislead the reader on two points. First, the Life is not *original*, since it consists mainly of selections in the very words, from Dr. Maty's *Life of Chesterfield* ; and, secondly, the Edition is not *complete*, as it does not include the *Correspondence and Miscellanies*, which follow Dr. Maty's *Memoir* and fill two volumes. Perhaps the word "American" was intended to modify the meaning of the word "complete," so that it might be better adapted to our republications of foreign works.